



## **The Role of Reflection in the Differentiated Instructional Process**

*by Mark Minott*

### **Abstract**

While there is a resurgence of interests and writings on the differentiated instructional process (DIP), and reflection in teaching is important and perennial, there is no known writing which explicitly displays the role of reflection in the DIP. Using a synergistic review of literature, the author contributes to filling this literary gap and clearly displays the role of reflection in the DIP. The literature reviewed displayed seven concepts: Reflection enables the process of adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interest and learning styles. Adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interest and learning styles requires a reflective engagement with teachers' practical knowledge. Reflection is integral to various tools used to facilitate the DIP. The use of questions and collaboration are reflective acts utilized in the DIP. Reflection-in-action i.e. 'framing' 'students' during formative assessment facilitates the effective delivery of differentiated lessons and reflective journaling is both a tool for assessing students learning in the differentiated classroom and for researching the DIP.

**Key Words:** Reflection, differentiated instruction, reflection-on-action, reflection-in-action, collaboration, students, learning styles, framing, reflective journal, practical knowledge

---

### **Introduction**

While differentiation is not a new way of teaching, over the past decade, there has been a steady and growing renewed interest in the subject (Tomlinson 1999, Pettig 2000, McTighe & Brown 2005, Garderen & Whittaker 2006, Anderson 2007 and Levy 2008). Teacher education colleges have also included differentiated instruction as a subject in their curricula.

As a reflective practitioner teaching differentiated instruction at a local University College, I became curious about the role and importance of reflection in the differentiated instructional process DIP. For, as I read, reflected on the differentiated instructional literature and taught, I 'sensed' the embedded pervasion of reflection. This pervasion is displayed in the many use of the word in the DIP. For example, Fattig and Taylor (2008) define the differentiated instructional process DIP as reflective and responsive teaching. This implies a contributory role of reflection to the DIP and specifically to teachers being responsive to

students' needs, interest and learning. Its pervasive nature is also revealed in the use of various elements of reflective teaching such as the use of questions. For example, Tomlinson (1999), an authority on differentiated instruction, states that one hallmark of a differentiated classroom is teachers asking questions of the curriculum. Question such as, 'what will it take to modify that instruction so that each learner comes away with understandings and skills that offers guidance to the next phrase of learning' (p. 2). A question such as this is also indicative of reflection for Zeichner and Liston (1996) state: If a teacher never questions the goals and the values that guide his or her work, the context in which he or she teaches, or never examines his or her assumptions, then it is our belief that this individual is not engaged in reflective teaching (p.1).

While the role of reflection seems fundamental to the DIP there are no known writings which make this role explicit. The aim of this review of literature is threefold: to contribute to filling this literary gap, clearly display the role of reflection in the differentiated instructional process DIP and inspire teacher-educators to use this essay in their teaching.

Accomplishing these tasks is important for a number of reasons: one, reflection in teaching is an important and perennial topic and, it is hard to improve one's practice in any area including the DIP, without reflection. Tomlinson (2000) agrees with this idea when she states that it is via reflection that the modification of differentiation takes place, in other words, it is by reflecting on the nature and needs of schools and teachers and being responsive, that change can take place. Two, this article continues the process of giving credence to reflection as integral to effective teaching generally, and specifically to the DIP. So what does the literature reveal about reflection in the DIP?

### **Reflection and the Differentiated Instructional Process**

To gain an understanding of the role of reflection in the differentiated instructional process, I conducted a review of the literature on reflection and differentiated instruction. This included electronic searches of the Educational Resources Information Center (ERIC), British Education Index (BEI) and the Elton Bryson Stephens Company (EBSCO) database. I found 14 records from the ERIC, 4 from ESBCO and none from the BEI database which combined reflection and differentiation. After a careful review of these and other literary sources seven concepts about the role of reflection in the DIP emerged: One, reflection enables the process of adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interests and learning styles. This I refer to as the doctrine of the DIP. Two, adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interest and learning styles requires a reflective engagement with teachers' practical knowledge. Three, reflection is integral to various tools used to facilitate the (DIP). Four, the use of questions is a reflective act utilized in the DIP. Five, peer collaboration is a reflective act utilized in the DIP. Six, reflection-in-action i.e. framing 'students' during formative assessments

facilitate the effective delivery of differentiated lessons and seven, reflective journaling is both a tool for assessing students' learning in the differentiated classroom and for researching the DIP. These are used as a framework for this literature review.

### **Reflection and the Doctrine of Differentiation**

The fundamental doctrine of the DIP is that the curriculum or lesson content, process, product and classroom environment must be modified or adapted to students' needs, interest and learning styles (Fattig, & Taylor, 2008, Tomlinson, 1999, Garderen & Whittaker, 2006 & Levy, 2008). Adaptation involves actions such as the use of flexible grouping i.e. whole, small or pairs, which allows students to work in 'alike groups' using books or tapes or the internet as a means of developing their understanding and knowledge on a topic or concept (Anderson, 2007) or, giving students choices (based on their learning styles, readiness or interests), in regards to what they produce to display learning; for example, they may be given the options of producing a research paper on a specific topic (Analytic learner), creating a poster depicting specific events or building a model to demonstrate a concept (Kinesthetic learner) (Fahey, 2000).

Reflection-on-action or critically thinking about one's action (Schon 1987), enables these fundamental practices. For example, there is the need for teachers to reflect-on-action i.e. think critically about students' readiness or interest or learning style before establishing flexible grouping and/or implementing assessment, and it is imperative that teachers reflect-on-action or think critically about students' interest in order to design engaging learning tasks. Again, while Levy (2008) argues that content can be differentiated or adapted by ascertaining students' readiness level, building on what they already know and this requires varying the content for each child, the process of building on what they already know cannot effectively proceed without reflection. Which Minott (2009) defines as careful consideration or thought, a process of disciplined intellectual criticism combining research, knowledge of context/classroom, and balanced judgment (critical thinking).

Effective differentiating or adapting content, process and product to students' needs, interest and learning styles also requires a reflective engagement with teachers' practical knowledge, that which they build 'on the job' as they grapple with the daily challenges of teaching and as they seek to refine their professional practices (Marland, 1998). Reflection aids the development of teachers' practical knowledge for Schulman and Schulman (2004) suggest that it is a 'tool' that enables teachers to develop the capacity to learn from their experiences. But more importantly, reflection improves their ability to effect purposeful change and integrate various aspects of teaching.

This is critical to the DIP, for learning from, and developing one's experience or knowing of what 'works', and being able to implement change and new ideas based on a reflective use of such practical knowledge is a requirement for the effective adaptation of content,

process, product and environment to students' interest, readiness and learning styles. For example, while teachers might be quite knowledgeable about what 'works' in a given setting, employing what 'works' in the old setting, to the new, void of reflection, may lead to diminishing returns in developing students' understanding or skills. This is possible because students in the new setting might have different or new interests and/or learning styles. They may be at different readiness levels or have completely different needs when compared to students in the old setting.

It is obvious that when teachers reflect on their practical knowledge or understanding of what 'works, lesson content, process, product, students' readiness, interest and learning styles, this enables them to teach effectively and enhance students' learning. McTighe & Brown (2005) agree with this proposition, for in developing their differentiated teaching and learning plan they point to the need for careful consideration of the variety in readiness, interest and learning modalities of students. This they argue, will cause responsive and differentiated teaching to flourish, for it is indeed via reflection that this important doctrine of the (DIP) is encouraged, developed and utilized in facilitating learning.

The literature also displays the fact that reflection is integral to various tools used to facilitate the DIP. For example, Rock, Gregg, Ellis, & Gable (2008) developed a framework to guide the transformation of undifferentiated into differentiated instructional practice. They called this framework 'REACH' which made use of a differentiated instructional quality indicators inventory. The acronym highlights the steps of the framework i.e. R, reflect, E, evaluation, A, analysis, C craft research and H, hone in on the craft. The first quality indicator focuses on the teachers' roles in employing 'REACH' as a tool in the DIP. The writers refer to this indicator as 'reflection on will and skills' and argue that among many things, reflection is a benchmark of effective instruction for students with diverse learning needs. It is important for teachers to assess their current knowledge of skills via reflection, and to ask themselves questions that will aid the process of reflecting on 'self'. The use of questions in the DIP and its connection with reflection is discussed later in this paper. In the process of 'reflection on will and skills' the writers urge teachers to acknowledge any misgivings they may have about differentiation. The questioning of 'self' is also a reflective action that is also attended to later.

The study of Cassady, Neumeister, Adam, Cross, Dixon and Pierce (2004) is another example of a tool aimed at improving the DIP in which reflection is integral.

The writers developed a differentiated classroom observation scale to examine the differential learning activities and experiences of gifted children educated in regular classroom settings. Central to the scale and its analysis is the post-observation interview and reflection. This involves the teacher being observed during the DIP providing any additional information that may be helpful to understanding the observation, and the

observer, to provide her or his impressions of the classroom environment that may not have been fully represented in the standard protocol.

Both studies highlighted above, continue to point to the importance of reflection and aspects of reflective teaching such as, the use of questions and reflecting on 'self' as teacher, as inextricably linked to tools which enable the DIP.

As indicated in the forgoing discussion, the use of questions, i.e. teachers' questioning 'self', context or various aspects of their practice, is critical to the DIP.

### **The Use of Questions as a Reflective Act Utilized in the Differentiated Instructional Process**

All articles examined, mentioned the use of questions in the DIP. For example, critical to stage one of the 'REACH' frame work discussed above, is the use of questions. The writers suggest that teachers ask questions that focus on 'self', in relation to the framework. For example, what about me, how will I be? These questions are aimed at assessing teachers' current content knowledge. They question the curriculum, for example. What content is there? Why should they [students] care? Implicitly, these questions suggest that in the DIP, aspects of the curriculum taught must be guided by students' interest and educational needs.

The writers also suggest that questions are asked about students for example. Who are the learners? Who is on the back burner? The goal of these questions is to gain specific knowledge about each student. There is also the need to question instructional strategies. For example, what method fits? The aim of this question is to enable teachers to connect content to student by crafting research-based lessons. Finally, there is the need to question the assessment process. For example, how did it go? How do I know? These questions enable teachers to look critically and analyze student-performance and their own behaviour and use the answers to make sound instructional decisions (Rock, Gregg, Ellis, & Gable 2008).

McTighe and Brown (2005), speaking of backward design and differentiated instruction, proposed that while developing a differentiated learning plan, teachers should ask questions such as, 'How will I help learners know?', How will I hook and engage the learners?, How will I equip learners through experience-based learning activities to succeed in mastering identified standards?(p. 240). An analysis of the questions above reveals a focus on context, content and 'self'. This is in-line with Zeichner and Liston (1996) definition of reflective teaching as indicated in the foregone discussion. For a common feature of the reflective process is the questioning of 'self', that is, one's belief, values, assumptions, context, and goals, in relation to practice as Cruickshank (1987) points out.

Collaboration is another feature of the DIP highlighted by the literature and which is also an aspect of reflective teaching.

### **Peer collaboration as a reflective act utilised in the Differentiated Instructional Process**

Friend and Cook (1992) define collaboration as joint planning, decision making and problem solving that may occur in a variety of formal or informal group configurations for the purpose of accomplishing a common goal. Pettig (2000) encourages teachers engaged in the DIP to 'get a buddy' for peer collaboration. This is essential to implementing the DIP, for the very act of discussing ideas with peers is crucial to both teacher and students' learning. Benjamin (2006) adds to this argument by reminding her readers that differentiated instruction thrives in a collegial community and that a collegial community must be a venue for reflecting or thinking critically about the DIP.

Cunningham (2001) points out that collaboration is a reflective act which involves teachers discussing and analyzing with others, problems they encounter in their classroom, to aid their analysis of situations, which could eventuate into improved future classroom encounters. They could also engage in the disclosure of feeling, ideas, receiving and giving feedback as a part of a collaborative experience, as purported by (Day 1999). This thought is supported by Pettig (2000) when the writer pointed out that during the DIP 'buddies' share and disclose feelings of success and failure. These occurrences continue the process of pointing to the importance and centrality of reflection in the DIP. However, it is in the area of 'framing' students that reflection contributes most to the implementation of the DIP.

### **Reflection-in-action (Framing) and the Differentiated Instructional Process**

In a differentiated classroom, assessment is on-going and diagnostic and its goal is to provide teachers with day-to-day data on students' readiness for particular ideas and skills, their interest and learning styles (Tomlinson, 1999). Assessing students formatively may be achieved via various methods, including observing students at work during an actual lesson or reading their journal entries or talking with them via whole or small group discussions. It is mainly during students' assessment that teachers are engaged in reflection-in-action or 'framing'. According to Schon (1987), 'framing' means teachers select what will be treated as the problem, set the boundaries of their attention to it, impose on it a coherence, which allows them to say what is wrong and in what direction the situation needs to be changed. This means, in a differentiated classroom, the students are treated as the 'problem' on which teachers impose a coherence which allows them to say what needs to be done, and how it is to be corrected or altered in order to modify or adapt the curriculum to their needs, interests and learning styles (Schon, 1987). 'Framing' normally occurs during the teaching of an actual lesson for this is when students' needs are best identified and used to modify or adapt content, process or product accordingly. By

carrying out the process of 'framing' students, teachers in the differentiated classroom can see an emerging picture of which student understands key idea, who can perform targeted skills and at what levels of proficiency and with what degree of interest (Tomlinson, 1999). As Schon (1987) states, framing allows teachers to identify both the ends to be sought and the means to be employed. Lastly, the literature reveals the use of reflective journaling as a tool for research and assessing learning in the DIP.

### **Reflective Journaling as a Learning Tool in the Differentiated Instructional Process**

McTighe and Brown (2005) and Langevin (2009), see reflective journaling as both a learning and research tool for assessing students' readiness, interests and learning styles and as a general tool for ascertaining what students learn. Langevin (2009) reported that the use of reflective journaling (as a data collection instrument in her action research on differentiated instruction) helped students to provide honest and timely feedback on what was and was not working for them, as well as ideas for future lessons. McTighe and Brown (2005) argue that the process of differentiated instruction requires that students are continuously involved in various types of self-reflection and self-assessment and reflective journaling can facilitate this process.

The role and use of reflective journaling as a tool which enables reflection is well documented (Minott 2008, Clarke 2004, Uline, Wilson, and Cordry 2004 & Chitpin 2006). Clarke (2004) points out that it has been used to promote reflective thinking. Chitpin (2006) explores the effectiveness of reflective journal keeping as a means of developing reflective practice in pre-service teachers. The inclusion of a reflective tool which facilitates students' self-reflection and self-assessment also points to the importance and centrality of reflection in the DIP.

Having said all this, what exactly is the role of reflection in the DIP?

### **Summary and Conclusion**

This article reveals that:

- Reflection enables the process of modifying or adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interest and learning styles;
- Adapting the curriculum or lesson content, process, product and classroom environment to students' needs, interest and learning styles requires a reflective engagement with teachers' practical knowledge;
- Reflection is integral to various tools used to facilitate the DIP;
- The use of questions is a reflective act utilized in the DIP;
- Peer collaboration is a reflective act utilised in the DIP;
- Reflection-in-action (i.e. framing 'students' during formative assessments), facilitates the effective delivery of differentiated lessons;

- Reflective journaling is both a tool for assessing students' learning in the differentiated classroom and for researching the DIP.

While this synergistic literature review clearly points out the role of reflection in the DIP and while individually, each aspects of reflection identified, contributes to the DIP, it is the combined use of all that truly makes for a reflective differentiated instructive process (RDIP). Engaging in a RDIP should be the ultimate aim of all teachers engaged in lesson differentiation.

## References

Anderson, K.M. (2007). Differentiated Instruction to include all Students. *Preventing School Failure* 51:3, pp. 49-54.

Benjamin, A. (2006). Valuing Differentiated Instruction Leadership *Compass* 72:1, pp. 57-59.

Cassady, J.C., Neumeister, K.L.S., Adam, C.M., Cross, T.L., Dixon, F.A., & Pierce, R.L. (2004). The Differentiated Classroom Observation Scale. *Roeper Review Spring*, 26:3, pp. 139-146.

Chitpin, S. (2006). The Use of Reflective Journal Keeping in a Teacher Education Program: A Popperian Analysis. *Reflective Practice*, 7:1, pp. 73-86(14).

Clarke, M. (2004). Reflection: Journals and Reflective Questions: A Strategy for Professional Learning. *Australian Journal of Teacher Education*, 29:2, pp. 11-23.

Cruickshank, D. (1987). *Reflective Teaching-The Preparation of Student Teaching*. Association of Teacher Educators.

Cunningham, F.M.A. (2001). Reflective teaching Practice in Adult ESL in *Eric Digest Washington DC* retrieved September 8 2005 from: <http://www.cal.org/caela/esl%5Fresources/digests/reflect.html>

Day, C. (1999). Professional Development and Reflective Practice: Purposes, Processes and Partnership. *Pedagogy, Culture and Society* 7:2, pp. 221-233

Fahey, J.A. (2000). Who wants to differentiate instructions? We did..." *Educational Leadership* September, pp 70-72.

Fattig, M.L., & Taylor, M.T.T. (2008) *Co-Teaching in the Differentiated Classroom Successful Collaboration, Lesson Design, and Classroom Management*. San Francisco: Jossey- Bass.

Friend, M., & Cook, L. (1992). The New Including: How It Really Works. *Instructor* 101:7, pp. 30-36

Garderen, D.V., & Whittaker, C. (2006). *Planning Differentiated*



Multicultural Instruction for Secondary Inclusive Classrooms. *Teaching Exceptional Children*. 38:3, pp. 12-20.

Langevin, L. (2009). *Differentiated Instruction: Our Story* retrieved June 23, 2009 from:  
<http://www.mes.ualberta.ca/pdfs/cappingprojects/Langevin.pdf>.

Levy, H.M. (2008). Meeting the Needs of all Students through Differentiated Instruction: Helping Everything Child Reach and Exceed Standards. *The Clearing House* 81:4, pp.161-164.

Marland, P. (1998). Teachers' Practical Theories: Implications for Pre-service Teacher Education. *Asia Pacific Journal of Teacher Education and Development* 1.2:15-23.

McTighe, J., & Brown, J.L. (2005). Differentiated Instruction and Educational Standards: Is Détente Possible? *Theory into Practice* 44:3, pp. 234-244.

Minott, M.A. (2009) *Reflection and Reflective Teaching, A Case study of Four Seasoned Teachers in the Cayman Islands*. Germany VDM Verlag Dr. Müller Aktiengesellschaft & Co.

Minott, M.A. (2008). Valli's Typology of Reflection and the Analysis of Pre-service Teachers' Reflective Journals. *Australian Journal of Teacher Education*. 35:5, pp.55-65

Pettig, K.M. (2000). On the Road to Differentiated Practice. *Educational Leadership*. September

Rock, M., Gregg, M., Ellis, E., & Gable, R.A. (2008). REACH: A Framework for Differentiated Classroom Instruction. *Preventing School Failure*. 52:2, pp.31-47.

Schon, D.A. (1987). *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass.

Shulman, L.S., & Shulman, J.H. (2004). How and What Teachers Learn: A Shifting Perspective. *Journal of Curriculum Studies* 36:2, pp. 257-271.

Tomlinson, C. (1999). *The Differentiated Classroom: Responding to the Needs of All Learners*. Virginia Association for Supervision and Curriculum Development.

Tomlinson, C. (2000). Differentiated Instruction: Can it Work? *The Education Digest*. 65:5, pp.25-31.

Uline, C., Wilson, J.D., & Cordry, S. (2004). *Reflective Journals: A Valuable Tool for Teacher Preparation*. Retrieved March 20th 2008 from  
[http://findarticles.com/p/articles/mi\\_qa3673/is\\_200404/ai\\_n9345201/print](http://findarticles.com/p/articles/mi_qa3673/is_200404/ai_n9345201/print).

Zeichner, K. M., & Liston, D. P. (Eds) (1996). *Reflective Teaching: An Introduction*. Mahwah NJ: Lawrence Erlbaun Associates.

---

**Dr. Mark A. Minott** is an Assistant Professor in the Department of Teacher Education at the University College of the Cayman Islands. His work has appeared in such peer-reviewed journals as the *Australian Journal of Teacher Education*, the *McGill Journal of Education* and the *International Journal of Music Education*. He can be reached at [mminott@uccci.edu.ky](mailto:mminott@uccci.edu.ky).

◀ Contents

---

• The views expressed by the authors are those of the authors and do not necessarily reflect those of The College Quarterly or of Seneca College.

Copyright © 2009 - The College Quarterly, Seneca College of Applied Arts and Technology